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IGPPS Sponsored Seminar and Workshop

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The Future of Temporary Seismographic Deployments

Thursday, October 4, 2012
1:00 - 2:00 PM
--PLEASE NOTE LOCATION CHANGE--
Los Alamos Research Park, 2nd Floor, 203A Conference Room

Abstract: The general technology and methodology associated with IRIS and similar portable research instrumentation pools used by the research community for imaging and other seismological studies during the past 25 years has been remarkably stable; one could argue that the last major development of the present system was the wholesale incorporation of GPS timing (and the retiring of other timing systems) c. 20 years ago! The general reasons for this level of stasis are that the current technology is highly effective and has only recently begun to reach its limits of scalability. The phenomenal success of portable force feedback broadband seismic sensors in capturing an extraordinarily valuable sector of the seismological spectrum at an (sometimes semi-) affordable cost, the increasing need for ever larger pools of associated standardized dataloggers with uniform operational protocols, the sporadic nature of sufficiently large funding opportunities to upgrade large subsets of the instrumentation, and the extraordinarily broad range of evolving scientific opportunities (which has kept the IRIS PASSCAL instrumentation pool, for example, very well exercised) have all contributed to this stable situation. However scientific ambitions and technological capabilities are approaching an interesting and likely historical juncture where new efforts that would employ much larger pools of portable (short period through broadband) instrumentation are realizable. This talk will overview some key technologies, science targets and methodologies that can be facilitated by a new “superpool” that would be capable of fielding many hundreds to thousands of seismographs at a time, and will explore what logistical and technical capabilities will be required to effect their deployment in a next generation of seismological experiments that will be deployed at spatial scales that approach or exceed the spatial Nyquist limit.

Workshop
(by invitation only)
2:30 PM
Research Park, 3rd Floor, Conf. Rm T301

Please RSVP by COB Tuesday, October 2

The purpose of the workshop is to encourage free discussion between geoscience sensor users and sensor developers to better match sensor capabilities with geoscience sensor requirements for more effectively addressing both current and potential future science and mission goals. It is hoped that sensor developers will come away with improved understanding of what new sensing capabilities the geoscience community needs to spur future seismological advances.

If you wish to participate please send a request to Georgia Sanchez at georgia@lanl.gov with a justification. Meeting accommodations are limited.

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Hosted by the Institute of Geophysics and Planetary Physics (IGPPS)